

AMENDMENTS TO THE CLAIMS

Claim 1. (Currently Amended)

An image display device for displaying an image according to image data, comprising:

a detection unit for detecting bright parts of the image that are adjacent to dark parts of the image, from the image data, the bright parts having a higher luminance value than the dark parts;

a smoothing unit coupled to the detection unit, for smoothing the bright parts of the image, detected by the detection unit, that are adjacent to the dark parts of the image by filtering the image data, leaving the dark parts of the image unsmoothed; and

a display unit coupled to the smoothing unit, for displaying the image data, including the smoothed bright parts of the image and the unsmoothed dark parts of the image.

Claim 2. (Original)

The image display device of claim 1, wherein the image data include data for different primary colors, and the detection unit detects said bright parts separately for each primary color.

Claim 3. (Cancelled)

Claim 4. (Original)

The image display device of claim 1, wherein the detection unit also detects edges in the image from the image data, and controls the smoothing unit so that only bright parts of the image that are adjacent to the detected edges are smoothed.

Claim 5. (Original)

The image display device of claim 1, wherein the detection unit also detects dark parts of the image having at most a predetermined width, and controls the smoothing unit so that only bright parts of the image that are adjacent to the detected dark parts having at most the predetermined width are smoothed.

Claim 6. (Original)

The image display device of claim 1, wherein the image data include data for different primary colors, and the smoothing unit uses different filtering characteristics for the different primary colors.

Claim 7. (Original)

The image display device of claim 1, wherein the image data include a luminance signal, and the smoothing unit filters the luminance signal.

Claim 8. (Currently Amended)

A method of displaying an image according to image data, comprising the steps of:

- (a) detecting dark parts of the image from the image data;
- (b) detecting bright parts of the image that are adjacent to the dark parts of the image, from the image data, the bright parts having a higher luminance value than the dark parts;
- (c) smoothing the bright parts detected in said step (b) by filtering the image data, leaving the dark parts of the image unsmoothed; and
- (d) displaying the image data, including the smoothed bright parts of the image and the unsmoothed dark parts of the image.

Claim 9. (Original)

The method of claim 8, further comprising the steps of:

- (e) detecting edges in the image from the image data; and
- (f) detecting bright parts in the image that are adjacent to the detected edges;

wherein only the bright parts detected in said step (f) are smoothed in said step (c).

Claim 10. (Original)

The method of claim 8, further comprising the steps of:

(g) detecting dark parts of the image having at most a predetermined width; and

(h) detecting bright parts in the image that are adjacent to the dark parts detected in said step (g);

wherein only the bright parts detected in said step (h) are smoothed in said step (c).

Claim 11. (Original)

The method of claim 8, wherein the image data include data for different primary colors, and said step (c) uses different filtering characteristics for the different primary colors.

Claim 12. (Withdrawn)

An image display device for displaying an image according to image data for different primary colors, comprising:

a plurality of smoothing units for filtering the image data of respective

primary colors, using different filtering characteristics for the different primary colors; and

a display unit coupled to the smoothing units, for displaying the image according to the filtered image data.

Claim 13. (Withdrawn)

The image display device of claim 12, wherein:

the display unit displays picture elements in which a first one of the primary colors occupies a leftmost position, a second one of the primary colors occupies a central position, and a third one of the primary colors occupies a rightmost position;

a first one of the smoothing units, filtering the image data of the first one of the primary colors, has an asymmetric filtering characteristic with a centroid shifted right;

a second one of the smoothing units, filtering the image data of the second one of the primary colors, has a symmetric filtering characteristic; and

a third one of the smoothing units, filtering the image data of the third one of the primary colors, has an asymmetric filtering characteristic with a centroid shifted left.

Claim 14. (Withdrawn)

The image display device of claim 12, wherein:

the display unit displays picture elements in which a first one of the primary colors occupies a leftmost position, a second one of the primary colors occupies a central position, and a third one of the primary colors occupies a rightmost position;

a first one of the smoothing units, filtering the image data of the first one of the primary colors, has a first passband;

a second one of the smoothing units, filtering the image data of the second one of the primary colors, has a second passband wider than the first passband; and

a third one of the smoothing units, filtering the image data of the third one of the primary colors, has a third passband narrower than the second passband.

Claim 15. (Withdrawn)

The image display device of claim 12, wherein:

the display unit displays picture elements in which a first one of the primary colors occupies a first side, a second one of the primary colors occupies a central position, and a third one of the primary colors occupies a second side opposite the first side;

a first one of the smoothing units, filtering the image data of the first one of the primary colors, has an asymmetric filtering characteristic with a centroid shifted by a first amount toward the second side;

a second one of the smoothing units, filtering the image data of the second one of the primary colors, has an asymmetric filtering characteristic with a centroid shifted by a second amount, at most equal to the first amount, toward the second side; and

a third one of the smoothing units, filtering the image data of the second one of the primary colors, has an asymmetric filtering characteristic with a centroid shifted by a third amount, less than the first amount, toward the first side.

Claim 16. (Withdrawn)

A method of displaying an image according to image data for different primary colors, comprising the steps of:

- (a) smoothing the image by filtering the image data, using different filtering characteristics for the different primary colors; and
- (b) displaying the image according to the filtered image data.

Claim 17. (Withdrawn)

The method of claim 16, wherein:

said step (b) includes displaying picture elements in which a first one of the primary colors occupies a leftmost position and a second one of the primary colors occupies a rightmost position;

said step (a) uses a first filtering characteristic having a centroid shifted right for the first one of the primary colors, and a second filtering characteristic having a centroid shifted left for the second one of the primary colors.

Claim 18. (Withdrawn)

The method of claim 17, wherein:

a third one of the primary colors occupies a central position in said picture elements; and

said step (a) uses a third filtering characteristic, having a wider passband than the first filtering characteristic and the second filtering characteristic, to filter the third one of the primary colors.

Claim 19. (Withdrawn)

An image display device for displaying an image according to image data for different primary colors, comprising:



a smoothing unit filtering the image data of respective primary colors, using filtering characteristics having centroids shifted in a certain direction for all of the primary colors; and

a display unit coupled to the smoothing unit, having a screen scanned in said certain direction, displaying the image according to the filtered image data on the screen.

Claim 20. (Withdrawn)

A method of displaying an image according to image data for different primary colors, comprising the steps of:

(a) smoothing the image by filtering the image data, using filtering characteristics having centroids shifted in a certain direction for all of the primary colors; and

(b) displaying the image according to the filtered image data on a screen scanned in said certain direction.

Claim 21. (Previously Presented)

The image display device of claim 1, wherein the smoothing unit includes at least two filters, the image data being selectively filtered through one of the at least two filters determinative upon a control signal produced by the detection unit.

Claim 22. (Previously Presented)

The image display device of claim 21, wherein a first filter is selected if the detection unit detects a bright part of the image adjacent to a dark part of the image.

Claim 23. (Previously Presented)

The image display device of claim 21, wherein a second filter is selected if the detection unit does not detect a bright part of an image adjacent to a dark part of the image.

Claim 24. (Previously Presented)

The method of claim 8, further including selecting one of at least two filters for filtering the image signal, the selection being based on a control signal created during the detection of dark parts and bright parts.

Claim 25. (Previously Presented)

The method of claim 24, wherein a first filter is selected if a bright part of the image adjacent to a dark part of the image is detected.

Claim 26. (Previously Presented)

The image display device of claim 24, wherein a second filter is selected if a bright part of an image adjacent to a dark part of an image is not detected.

Claim 27. (New)

An image display device for displaying an image according to image data, comprising:

a detection unit for detecting bright pixels of the image that are adjacent to dark pixels of the image, from the image data,

a smoothing unit coupled to the detection unit, for smoothing the bright pixels of the image, detected by the detection unit, that are adjacent to the dark pixels of the image by filtering the image data, leaving the dark pixels of the image unsmoothed; and

a display unit coupled to the smoothing unit, for displaying the image data, including the smoothed bright pixels of the image and the unsmoothed dark pixels of the image.

Claim 28. (New)

A method of displaying an image according to image data, comprising the steps of:

(a) detecting dark pixels of the image from the image data;

- (b) detecting bright pixels of the image that are adjacent to the dark pixels of the image, from the image data,
- (c) smoothing the bright pixels detected in said step (b) by filtering the image data, leaving the dark pixels of the image unsmoothed; and
- (d) displaying the image data, including the smoothed bright pixels of the image and the unsmoothed dark pixels of the image.